

CLMPTO

02/15/05

RT

1. (Currently amended) A composite superconducting tape comprising a multiplicity of constituent superconducting tapes stacked parallel to one another with major faces in contact so as to form a series of stacks, and wherein at least some of the constituent superconducting tapes have widths not greater than half a width of the composite superconducting tape and are laid edge to edge with each other, the composite superconducting tape including at least one tape bridging the stacks and wherein the constituent composite superconducting tape tapes are interbonded by interfusion is diffusion bonded together.
2. (Previously presented) A composite superconducting tape as claimed in claim 1, in which all the constituent superconducting tapes have a width that is substantially a simple fraction of the width of the composite superconducting tape so that the constituent superconducting tapes form two or more stacks with aligned zones therebetween which contain no superconducting material.
3. (Previously presented) A composite superconducting tape as claimed in claim 2, in which the simple fraction is a half, so that there are two stacks.
4. (Previously presented) A composite superconducting tape as claimed in claim 1, wherein the at least one bridging tape is a full width of the composite superconducting tape and is produced from a silver or silver alloy material.
5. (Previously presented) A composite superconducting tape as claimed in claim 4, wherein there are at least two full-width metal bridging tapes, one bridging tape at one end of the stacks and a second bridging tape at another end of the stacks.
6. (CANCELLED)

7. (Previously presented) A composite superconducting tape as claimed in claim 5, wherein respective bending moment strengths of the two full-width metal tapes are unequal.

8. (Previously presented) A composite superconducting tape as claimed in claim 1, in which the composite superconducting tape is diffusion-bonded and all elongate components extend longitudinally.

9. (Previously presented) A composite superconducting tape as claimed in claim 1, in which the constituent superconducting tapes are all powder-in-tube superconducting tapes.

10. (CANCELLED)

11. (Currently Amended) A composite superconducting tape constructed from a plurality of superconducting tapes each having two opposite major faces and two opposite edges extending between the major faces, the composite superconducting tape including:

a first stack having a plurality of the superconducting tapes wherein each superconducting tape in the first stack has at least one major face in contact with a major face of an adjacent superconducting tape in the first stack;

a second stack having a plurality of superconducting tapes wherein each superconducting tape in the second stack has at least one major face in contact with a major face of an adjacent superconducting tape in the second stack, wherein at least some of the superconducting tapes have widths not greater than half a width of the composite superconducting tape; and

at least one bridging tape spanning between the first and second stacks for maintaining

the first and second stacks in a substantially parallel edge-to-edge configuration,
wherein the constituent composite superconducting tape tapes are interbonded by
interfusion is-diffusion bonded together.

12. (Previously presented) A composite superconducting tape as claimed in claim 11,
wherein all the superconducting tapes have a width that is substantially a simple fraction of the
width of the composite superconducting tape so that the superconducting tapes form at least the
first and second stacks with aligned zones therebetween which contain no superconducting
material.

13. (Previously presented) A composite superconducting tape as claimed in claim 12,
wherein said simple fraction is a half, so that there are two stacks.

14. (Previously presented) A composite superconducting tape as claimed in claim 11,
wherein the bridging tape is a full width of the composite superconducting tape and is produced
from a silver or silver alloy material.

15. (Previously presented) A composite superconducting tape as claimed in claim 14,
wherein there are at least two full-width metal bridging tapes, one bridging tape at one end of the
stacks and a second bridging tape at another end of the stacks.

16. (Previously presented) A composite superconducting tape as claimed in claim 15,
wherein the respective bending moment strengths of the two full-width metal tapes are unequal.

17. (Previously presented) A composite superconducting tape as claimed in claim 11,
wherein the composite superconducting tape is diffusion-bonded and all elongate components
extend longitudinally.

18. (Previously presented) A composite superconducting tape as claimed in claim 11, in
which the superconducting tapes are all powder-in-tube superconducting tapes.